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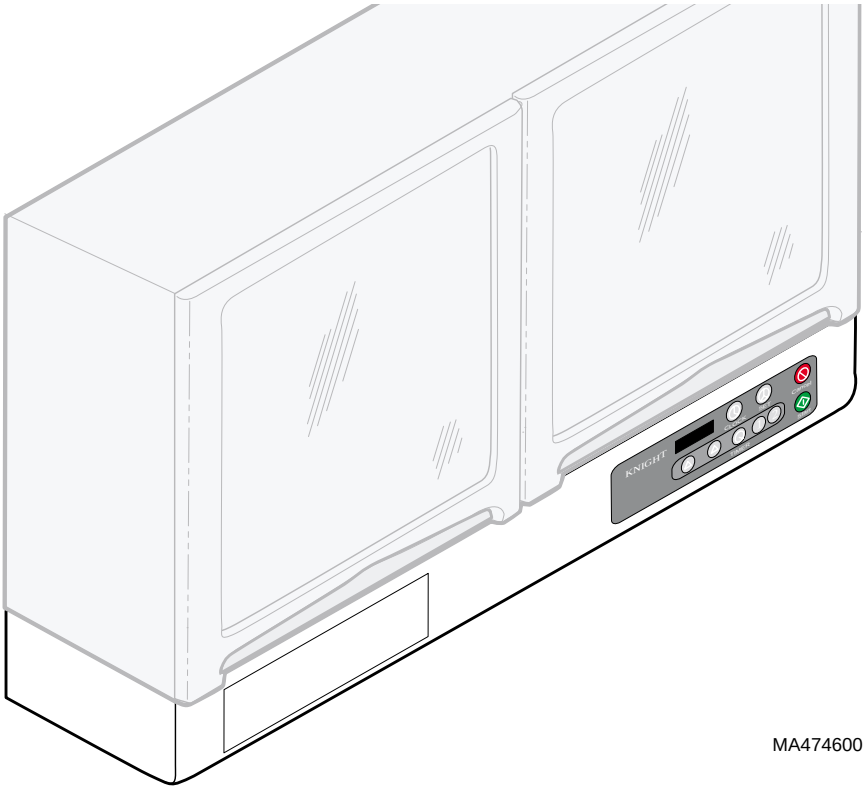
MIDMARK®

Operation Manual

Models:
DM-ATR001 (Task Light / X-Ray Viewer / Clock, RH
DM-ATL001 (Task Light / X-Ray Viewer / Clock, LH



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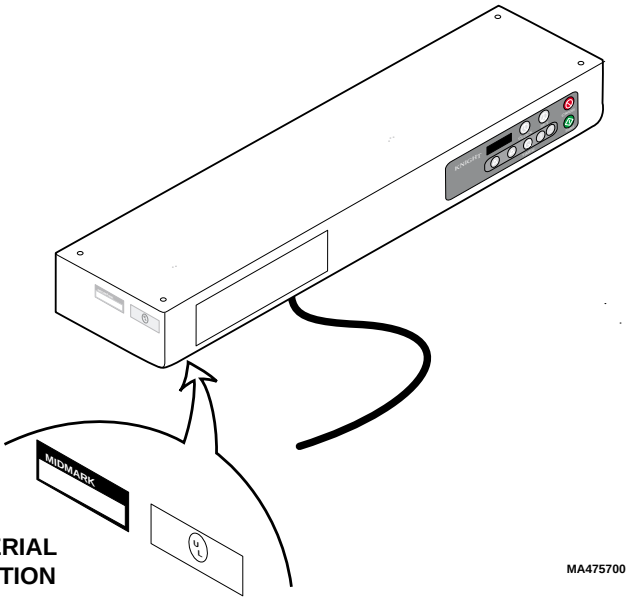
Owner's Product Identification

(information that you will need to provide for servicing - key information is highlighted)

Date of Purchase	***Serial Number***
Name of Owner / Facility / Department	***Model Number***
Name of Authorized Knight Dealer	Telephone # of Authorized Knight Dealer
Address of Authorized Knight Dealer	



MODEL AND SERIAL NUMBER LOCATION

MA475700

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IMPORTANT INFORMATION

Scope and Purpose of This Manual

This manual covers complete instructions for the operation and normal care of the Task Light. It is intended that this manual be used by any dental personnel responsible for operating the Task Light during a dental procedure or performing operator level maintenance. No repair information is included in this manual as no repairs are authorized at the operator level.

Intended Use of Product

The product is intended to be used as a timing device to indicate the time of day, and provide a means of timing various processes used in dental procedures, to be an overhead light providing light for a lower countertop, and to provide back-lighting for the viewing of dental x-rays.

Safety Instructions

The primary concern of Knight is that this equipment is operated and maintained with the safety of the patient and staff in mind. To assure safer and more reliable operation:

- Read and understand this manual before attempting to operate the task light.
- Assure that appropriate personnel are informed on the contents of this manual; this is the responsibility of the purchaser.
- Assure that this manual is located near the task light.

Explanation of Safety Symbols and Notes

DANGER

Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury. The DANGER symbol is limited to the most extreme situations.

WARNING

Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

CAUTION

Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

EQUIPMENT ALERT
Indicates an imminently or potentially hazardous situation which, if not avoided, will or may result in serious, moderate, or minor equipment damage.

NOTE
Amplifies an operating procedure, practice, or condition.

Indicates that the operator's manual should be consulted for important information.

Indicates that the product is fragile; do not handle roughly.

Indicates that the product must be kept dry.

Indicates the temperature limitations for storage of the unit.

Transportation and Storage Conditions

- Ambient Temperature Range:..... -20°C to 40°C (-4°F to 104°F)
- Relative Humidity..... 10% to 90% (non-condensing)
- Atmospheric Pressure ..... 500hPa to 1060hPa (0.49atm to 1.05atm)

DESCRIPTION

Introduction

The task light unit is used primarily in dental operatories by dental assistants, HQP personnel, or dental hygienists. The task light consists of a clock / timer which is used to indicate time of day and provide a means of timing various processes used in dental procedures. The unit, which has a fluorescent lamp, provides lighting for a lower countertop. Also, located opposite the Clock / Timer panel, is a recessed area with a white acrylic insert which provides backlighting for the viewing of dental x-rays.

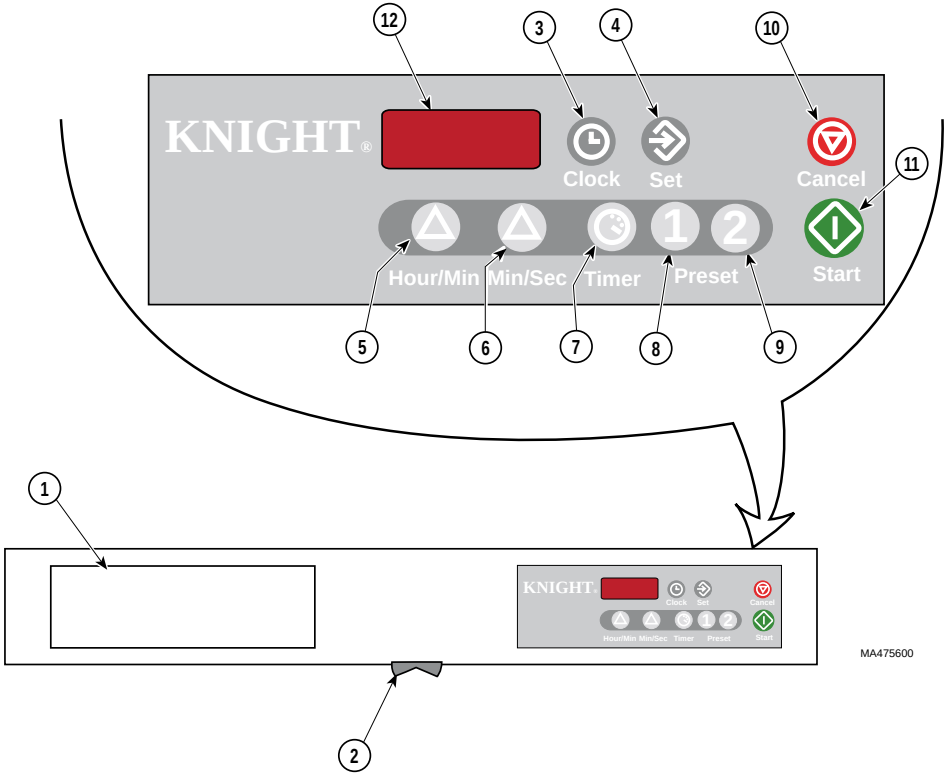
Features

The Task Light has . . .

- a Clock / Timer which remains powered on at all times and displays the current time of day. The Clock Timer has . . . .
  - a user control panel which allows the operator to set timer values for timed procedures and run those programs as desired.
  - a timer function which can be set to count down a timed procedure or to count up to keep track of elapsed time from the start of a procedure.
  - two preset timer functions which can be preset for the two timed procedures which are performed most often in that operatory.
  - an audible alarm to inform the operator that the preset time count-down has elapsed.
  - a backup power mode which continues to track the time of day and any timer count-downs which are in progress in the event of a short power interruption or failure (provides protection for at least 30 seconds).
- a fluorescent lamp, controlled by a on / off switch, provides overhead lighting for a lower countertop.
- a recessed area with a white acrylic insert which provides backlighting for the viewing of dental x-rays.

CONTROLS & INDICATORS

The following illustrations show the location of the task light's controls and indicators and the chart on the following pages describes their function.



Ref.	Control	Function
1	*X-Ray Backlight Panel*	*when an x-ray is placed on the recessed panel, the backlighting allows the x-ray to be viewed.*
2	*Light **ON / OFF** switch*	*used to turn the fluorescent lamp on and off.*
3	***CLOCK** button*	*when pressed, the display enters the **time of day mode** (the display shows the time of day). Also cancels any timer program.*
4	***SET** button*	*when pressed while in the **time of day mode** or **preset "1" or "2" modes**, the **set mode** for that function is activated, allowing the time setting displayed to be changed to the desired setting. Pressing the SET button again locks in the new time setting.*

Ref.	Control	Function
5	***Hour/Min** button*	*used to increment the hour digits of the time of day setting or the minutes digits of the Timer, Preset "1", or Preset "2" settings.*
6	***Min/Sec** button*	*used to increment the minutes digits of the time of day setting or the seconds digits of the Timer, Preset "1", or Preset "2" settings.*
7	***Timer** button*	*when pressed, the display enters the **show timer mode** (the display shows 00:00). Now, the count-down time is set to the desired value and Started. If left at 00:00 and Started, the time will count up, showing elapsed time.*
8	***Preset "1" button***	*when pressed, the display enters the **preset timer 1 mode** (the display shows the current programmed count-down time). From this mode, the count-down can be started by pressing the **START** button or the count-down time can be changed by pressing the **SET** button.*
9	***Preset "2" button***	*when pressed, the display enters the **preset timer 2 mode** (the display shows the current programmed count-down time). From this mode, the count-down can be started by pressing the **START** button or the count-down time can be changed by pressing the **SET** button.*
10	***Cancel** button*	*when pressed, the function being executed is cancelled and the display shows the time of day.*
11	***Start** button*	*when the clock / timer is in one of the three count-down modes; the **timer mode**, **preset timer 1 mode**, or **preset timer 2 mode**, pressing the **Start** button will start the count-down.*
12	*display*	*displays four digits XX:XX for hours and minutes in the time of day mode or minutes and seconds in the timer mode, preset timer "1" mode, or preset timer "2" mode.*

OPERATION

Power Loss or Interruption / Backup Power Mode

If, for any reason, power is interrupted while the clock timer is being used, there are two possible outcomes.

1. ***If the power is out for less than 30 seconds***, the alarm sounds three short beeps after which the clock automatically restores the correct time of day and the preprogrammed times are saved. If a timer is running while the

power loss occurs, the current timer operation is restored and the display will resume timer operation as if the power loss had not occurred. However, if a timer counts down to zero during the power loss, the end of count-down alarm will not sound when power is restored.

2. ***If power is out for more than 30 seconds***, the clock / timer memory loses all its preprogrammed times. When the power is restored, the clock / timer executes a power up sequence; the alarm sounds three short beeps, the display shows 12:00 and blinks for 1/2 second on and 1/2 second off, and the preprogrammed timer settings are initialized to factory settings (PRESET TIMER 1 = 40 second count-down time and PRESET TIMER 2 = 3:00 minutes count-down time). The time of day must be reset and if necessary, the Preset 1 and Preset 2 times must be reset.

Setting the Time Of Day

1. If necessary, press the **CLOCK** button to enter the ***time of day mode.***
2. Press the **SET** button to enter the ***clock set mode***. The display shows the current time of day value.

> **NOTE**
> Pressing and releasing the **HOUR/MIN** button **our/Min** or **MIN/SEC** button **Min/Sec** advances the time value one number digit at a time. Pressing and holding the **HOUR/MIN** or **MIN/SEC** button advances the time value at a rapid pace.

3. Press the **HOUR/MIN** button **our/Min** to increment the hours digit of the time of day to the desired setting.
4. Press the **MIN/SEC** button **Min/Sec** to increment the minutes digit of the time of day to the desired setting.
5. Press the **SET** button to save the new time of day value. The new time of day value is now displayed.

Timer Count-down Operation

1. If necessary, press the **CLOCK** button to enter the ***time of day mode.***

2. Press the **TIMER** button to enter the ***timer mode*** (00:00 will be displayed).

> **NOTE**
> Pressing and releasing the **HOUR/MIN** button
>
> or **MIN/SEC** button
>
> advances the time value one number digit at a time. Pressing and holding the **HOUR/MIN** or **MIN/SEC** button advances the time value at a rapid pace.

3. Press the **HOUR/MIN** button

to increment the minutes digit of the desired timer setting.
4. Press the **MIN/SEC** button

to increment the seconds digit of the desired timer setting.

> **NOTE**
> Pressing the **CANCEL** button or **CLOCK** button will cancel the count-down program and the time of day will be displayed.

5. When the desired time is set, press the **START** button to begin the timer count-down.

   When the minutes and seconds decrement to 00:00 on the display, the end of count-down alarm will sound 5 alarm beeps to indicate to the operator that the desired time period is over.

   If the operator does not press the **CANCEL** button or **CLOCK** button, the Clock / Timer starts to count-up and displays the incrementing seconds and minutes (this way the operator can identify the post alarm time if they were not present at the end of the count-down).

Timer Count-Up Operation

1. If necessary, press the **CLOCK** button to enter the ***time of day mode.***
2. Press the **TIMER** button to enter the ***timer mode*** (00:00 will be displayed).
3. Press the **START** button to begin the timer count-up. The minutes and seconds will increment on the display showing the total elapsed time.
4. Press the **CANCEL** button or **CLOCK** button to cancel the count-up program and return the display to the time of day.

Programming Preset Timer 1 or Preset Timer 2 For Desired Time Setting

1. If necessary, press the **CLOCK** button to enter the ***time of day mode.***
2. Press the **PRESET TIMER 1** button or **PRESET TIMER 2** button to enter the ***preset timer 1*** or ***preset timer 2 mode***. The display shows the current programmed time value.
3. Press the **SET** button to enter the ***preset timer program mode***. The display shows the current programmed time value.

NOTE
Pressing and releasing the **HOUR/MIN** button our/Min or **MIN/SEC** button Min/Sec advances the time value one number digit at a time. Pressing and holding the **HOUR/MIN** or **MIN/SEC** button advances the time value at a rapid pace.

4. Press the **HOUR/MIN** button our/Min to increment the minutes digit to the desired timer setting.
5. Press the **MIN/SEC** button Min/Sec to increment the seconds digit to the desired timer setting.
6. Press the **SET** button to save the new preset timer value in memory and return the display to the time of day.

Preset Timer Count-down Operation

1. If necessary, press the **CLOCK** button to enter the ***time of day mode.***
2. Press the **PRESET TIMER 1** button to enter the ***preset timer 1 mode*** or the **PRESET TIMER 2** button to enter the ***preset timer 2 mode*** (the preprogrammed count-down time will be displayed).

NOTE
Pressing the **CANCEL** button or **CLOCK** button will cancel the count-down program and the time of day will be displayed.

3. Press the **START** button to begin the preset timer count-down.

   When the minutes and seconds decrement to 00:00 on the display, the end of count-down alarm will sound 5 alarm beeps to indicate to the operator that the desired time period is over.

If the operator does not press the **CANCEL button** or **CLOCK** button, the Clock / Timer starts to count-up and displays the incrementing seconds and minutes (this way the operator will be able to tell how long the time period really was if he/she was not present at the end of the count-down).

OPERATOR MAINTENANCE

Preventive Maintenance

Little routine maintenance is required other than periodic inspection of the electrical cord to ensure it is free of cuts or damage, periodic testing of the clock / timer buttons to ensure they are operating satisfactorily, periodic inspection of the display panel to ensure all of its segments are lighting up properly and none are burned out, and a periodic check of the fluorescent lamp to ensure the lamp and ballast assembly are operating properly.

Care of Task Light

Clean the task light weekly, wiping the painted metal and plastic surfaces with a clean, soft cloth. If desired, mild cleaners may be used. Periodic applications of common furniture wax will ease cleaning and help maintain the finished luster of the task light.

Fluorescent Lamp Replacement

When replacement of the task light fluorescent lamp is necessary, use a Type T8, 36 in. Length, 25 Watt Fluorescent lamp. To replace the fluorescent lamp, flex the lamp cover and remove it from the task light frame. Remove the old lamp from the lamp sockets and then insert the new lamp into the lamp sockets. Replace the lamp cover by flexing it and then inserting it above the lip of the task light frame.

CALLING FOR SERVICE

If you are having a problem or have a question, refer to the inside front cover of this manual and call your dealer. Make sure that you have the information that is highlighted on the inside front cover of this manual available. If you can't resolve your question or problem with your dealer, call the following number:

1-800-Midmark (1-800-643-6275) or 937-526-3662
8:00 a.m until 5:00 p.m. (Eastern Standard Time in the U.S.)
Monday thru Friday, except for standard U.S. holidays.

KNIGHT DENTAL CASEWORK LIMITED WARRANTY

Extension of Warranty

Midmark™ Corporation ("Midmark") warrants to the original purchaser its Knight Dental Casework, manufactured by Midmark, to be free from defects in material and workmanship under normal interior use and service. Midmark's obligation under this warranty is limited to the repair or replacement, at Midmark's option, of the parts or the products the defects of which are reported to Midmark within the applicable warranty period and which upon examination by Midmark prove to be defective.

Applicable Warranty Period

The applicable warranty period, measured from the date of delivery to the original user, shall be as follows:

(a) Five (5) years for all products and components (except for the shorter periods in (b and c)), including plastic laminate top surfaces, door and drawer fronts, castors, and electrical components such as task lights and cords.

(b) Three (3) years for task light ballast.

(c) One (1) year for plastic laminate top surfaces and accessories.

Exclusions

Midmark's warranty does not cover sinks, faucets, and plumbing accessories. Any warranties on these items are extended directly by the manufacturer of these items to the original purchaser. Information on these manufacturers' warranties will be enclosed with the applicable products. Also, Midmark will furnish copies of any of the warranties extended by any such manufacturers upon request.

This warranty does not cover and Midmark shall not be liable for: (1) repairs and replacements required because of misuse, abuse, negligence, alteration, accident, freight damage, or tampering; (2) matching of color, grain, or texture except to commercially acceptable standards; (3) changes in color caused by natural or artificial light; (4) products which are not installed, used, and properly cleaned as required in Midmark's written Installation Manual; (5) specially manufactured products; (6) products considered to be of a consumable nature such as light lamps and surge suppression product; (7) accessories or parts not manufactured by Midmark; (8) charges by anyone (including Midmark's authorized Knight Dental Casework dealers) for adjustments, repairs, replacement parts, installation, or other work performed upon or in connection with such products which is not expressly authorized in writing in advance by Midmark.

Exclusive Remedy

Midmark's only obligation under this warranty is the repair or replacement of defective parts. Midmark shall not be liable for any direct, special, indirect, incidental, exemplary, or consequential damages or delay.

No Authorization

No person or firm is authorized to create for Midmark any other obligation or liability in connection with the products.

THIS WARRANTY IS MIDMARK'S ONLY WARRANTY AND IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED. MIDMARK MAKES NO IMPLIED WARRANTIES OF ANY KIND INCLUDING ANY WARRANTIES OF MERCHANT-ABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE. THIS WARRANTY IS LIMITED TO THE REPAIR OR REPLACEMENT OF DEFECTIVE PARTS.NOTES:

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